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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/808,582	03/25/2004	Kia Silverbrook	ZG127US	8210
24011	7590	08/25/2004	EXAMINER	
SILVERBROOK RESEARCH PTY LTD			DO, AN H	
393 DARLING STREET			ART UNIT	
BALMAIN, 2041			PAPER NUMBER	
AUSTRALIA			2853	

DATE MAILED: 08/25/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/808,582	<b>Applicant(s)</b> SILVERBROOK ET AL.	
	<b>Examiner</b> An H. Do	<b>Art Unit</b> 2853	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 25 March 2004.  
2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-4 is/are rejected.  
7) ☒ Claim(s) 5-13 is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☒ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 25 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All    b) ☐ Some \*    c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☒ Certified copies of the priority documents have been received in Application No. 09/112,806.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>3/25/04</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Priority***

1. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in parent Application No. 09/112,806, filed on 10 July 1998.

### ***Information Disclosure Statement***

2. The information disclosure statement (IDS) submitted on 25 March 2004 was filed and is being considered by the examiner.

### ***Specification***

3. The disclosure is objected to because of the following informalities:  
-Insert --, now U.S. Patent No. 6,712,986, which is a Continuation of 09/112,806 filed 07/10/1998, now U.S. Patent No. 6,247,790.-- in line 1 on page 1 after "05/14/2001".  
Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

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5. Claims 1-3 are rejected under 35 U.S.C. 102(e) as being anticipated by Khuri-Yakub et al (US 5,828,394).

Khuri-Yakub et al disclose the following claimed limitations:

Regarding claim 1, an inkjet printhead (Figures 1-3, a fluid drop ejector) for printing on a media substrate (such as paper, medium or sheet), the printhead (a fluid drop ejector) comprising: a wafer substrate (11) defining a plurality of nozzle chambers (fluid reservoirs 14) for storing ink to be ejected, each of the nozzle chambers (14) having an outer wall (13) that faces the media substrate during use, the wall (13) having an ink ejection port (Figure 2, the centered orifice) and at least one actuator (17-19) for moving the ink ejection port (the centered orifice) away from the media substrate to eject ink (Figure 7C) from the corresponding nozzle chamber (14) via the ink ejection port (the centered orifice).

Regarding claim 2, wherein there's a plurality of actuators in the wall (Figures 11A-12).

Regarding claim 3, wherein the actuators (17-19) include a surface which bends inwards away from the centre of the nozzle chamber (14) upon actuation (Figure 7C).

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Khuri-Yakub et al (US 5,828,394) in view of Kawamura et al (US 6,543,884).

Khuri-Yakub et al disclose the claimed invention except for the limitation of wherein the actuators are actuated by means of a thermal actuator device.

Kawamura et al teach the actuators are actuated by means of a thermal actuator device (Figures 2 and 4, layers 24, 40, 42, 46, 48 and 50, column 2, lines 1-9), for the purpose of thermally ejecting an ink droplet.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the actuators actuated by means of a thermal actuator device, as taught by Kawamura et al into Khuri-Yakub et al, for the purpose of thermally ejecting an ink droplet.

***Allowable Subject Matter***

8. Claims 5-13 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

The primary reason for the allowance of claims 5-13 is the inclusion of the limitation of an inkjet printhead that includes a thermal actuator device having a conductive resistive heating element encased within a material having a high coefficient of thermal expansion. It is this limitation found in the claims, as it is claimed in the

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combination of, that has not been found, taught or suggested by the prior art of record which makes these claims allowable over the prior art.

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Inui et al (US 5,719,604) disclose a thermal inkjet printhead having a buckling body including a heater layer buckled when a current is applied. Karita et al (US 6,151,049) disclose a liquid discharge head having a flow path including a bubble-generating region in which bubbles are generated, a movable member having a free end on the side of the discharge opening.

**Contact Information**

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to An H. Do whose telephone number is 571-272-2143. The examiner can normally be reached on Monday-Friday (Flexible).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen D. Meier can be reached on 571-272-2149. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



AD  
August 18, 2004

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